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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,882	03/09/2006	Toyohisa Yamada	274391US26XPCT	1793
22850	7590	06/11/2009	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			BARRERA, RAMON M	
			ART UNIT	PAPER NUMBER
			2832	
			NOTIFICATION DATE	DELIVERY MODE
			06/11/2009	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/540,882	<b>Applicant(s)</b> YAMADA ET AL.	
	<b>Examiner</b> RAMON M. BARRERA	<b>Art Unit</b> 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/25/09,9/19/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of species I in the reply filed on 3/25/09 is acknowledged. The traversal is on the ground(s) that search of all the inventions would not place a serious burden on the examiner. This is not found persuasive because applicant's nonelected invention embodied in figs. 15-17 contains subject matter not coextensive with a search for the elected invention embodied in figs. 1-14.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 12 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim .

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, antecedent basis is lacking for "the plurality of magnetic poles", and "so as to face" is indefinite. In claim 3, antecedent basis is missing for "said adjacent electromagnets". In claim 5, "magnetic poles of permanent magnets of which the number is smaller than the number of magnetic poles of said electromagnets by 1" is

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indefinite in that fig. 1 discloses at least eight electromagnetic poles (2 poles per electromagnet (31,32,33,34)) and six permanent magnetic poles (2 poles per magnet(51,52,53)). Claims 2-4 and 6-11 inherit the defect in their parent claims.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Nihei, et al.(JP4-276363).

Nihei discloses a linear actuator, wherein a plurality of electromagnets (1,2) where coils (4,5) are wound around magnetic materials are provided so as to face each other in a manner where the polarities N and S of said electromagnets alternate at the time of excitation, and magnetic poles of a plurality of permanent magnets 3 that are aligned so as to form a movable member are placed in positions that face the plurality of magnetic poles, wherein said permanent magnets extend beyond the portions where said magnetic poles of said electromagnets are provided; wherein a notch is formed on a portion in the direction of the axis of said magnetic poles of said electromagnets that face said

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magnetic poles of said permanent magnets, so that a magnetic flux is inherently formed so as to pass said permanent magnets in the portions other than those where said magnetic poles of said electromagnets and said magnetic poles of said permanent magnets face each other; wherein three (and more) permanent magnets are aligned between said magnetic poles of said adjacent electromagnets.

7. Claims 5-10 rejected under 35 U.S.C. 102(e) as being anticipated by Ohya(US6472968).

Ohya in fig. 6 disclosed a linear actuator, wherein magnetic poles (23a) of a plurality of electromagnets (upper and lower) where coils are wound around magnetic materials are aligned in a manner where the polarities N and S alternate at the time of excitation, and magnetic poles of permanent magnets (3,4) of which the number is smaller than the number of magnetic poles of said electromagnets are aligned in positions that face said magnetic poles of said electromagnets, magnetic gaps are provided between said respective magnetic poles of said electromagnets on the side that faces the permanent magnets, and the magnetic poles of said permanent magnets are arranged so that one magnetic pole of said permanent magnets is capable of spanning between said respective magnetic poles of said electromagnets at the time of full stroke; wherein permanent magnets of which the magnetic poles are opposite that of adjacent permanent magnets are placed in positions adjacent to said permanent magnets, in a position that faces an end magnetic pole in the direction of the axis

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of the lane of the magnetic poles of said electromagnets on the side that faces said permanent magnets, and at least a portion of said permanent magnets extends to the outside of the end portion of the lane of the magnetic poles of said electromagnets at the time of full stroke; wherein a notch is provided at the center of said magnetic poles of said electromagnets on the side that faces said permanent magnets, so that a magnetic gap is provided; wherein a magnetic gap is provided between said adjacent permanent magnets; wherein magnetic materials 27 are placed between said respective magnetic poles of said electromagnets on the side that does not face said permanent magnets, so that a magnetic circuit which connects said respective magnetic poles is provided; wherein a support member 4 is provided on the outer surface of said permanent magnets, so as to fix said permanent magnets.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMON M. BARRERA whose telephone number is (571)272-1987. The examiner can normally be reached on Monday through Friday from 11 to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ramon M Barrera/  
Primary Examiner, Art Unit 2832

rmb